	<u>CIVIL</u> ABB	REVI		LEGEND:		
A AB ABV AC	ACID AGGREGATE BASE OR ANCHOR BOLT ABOVE ASPHALTIC CONCRETE OR ASBESTOS CEMENT	L LF LP LT	LENGTH OR LENGTH OF CURVE LINEAL FEET LOW PRESSURE OR LOW POINT LIGHT	<u>EXISTIN</u>	<u>NEW</u>	<u>ITEM</u>
AD ADJ AGGR ALT	AREA DRAIN ADJUSTABLE AGGREGATE ALTERNATE	MAN MAINT MAX	MANUAL MAINTAIN OR MAINTENANCE MAXIMUM		Δ	MONUMENT NO. COORDINATES, ELEVATION, AND DATUM
APPROX ARCH ASPH ASTM	APPROXIMATE ARCHITECTURAL ASPHALT AMERICAN SOCIETY FOR TESTING & MATERIALS	MECH MED MH	MECHANICAL MEDIUM MANHOLE		•	SOIL BORING LOCATION AND NO. OR WORKPOINT
AVG AWG AWWA	AMERICAN SOCIETY FOR TESTING & MATERIALS AVERAGE AMERICAN WRE GUAGE AMERICAN WATER WORKS ASSOCIATION	MIN MISC MLP MTL MON	MINIMUM MISCELLANEOUS METAL LIGHT POLE METAL MONUMENT		N N N	STRUCTURE CONCRETE
BC BCR BFV BLDG BLK	BEGIN CURVE BEGIN CURB RETURN BUTTERFLY VALVE BUILDING BLOCK	N NIC NO	NORTH NOT IN CONTRACT NUMBER			AC PAVEMENT
BM BOP BOT	BENCH MARK BOTTOM OF PIPE BOTTOM	NOM NRS NTS	NOM NON RISING STEM NOT TO SCALE	\Box		CONCRETE CURB AND GUTTER CONCRETE CURB
BW C	BOTH WAYS CONDUIT/CAUSTIC	OC OD OH	ON CENTER OUTSIDE DIAMETER OVERHEAD	GEN		BLOCK WALL
CA CB CC	COMPRESSED AIR CATCH BASIN CENTER TO CENTER	OPP ORIG OZ	OPPOSITE ORIGINAL OUNCE			CONTOUR
CF CFS CHWR CHWS	CURB FACE, CUBIC FOOT OR CUBIC FEET CUBIC FEET PER SECOND CHILLED WATER RETURN CHILLED WATER SUPPLY	P PB	POWER PULL BOX	OGRAPHIC	26.51	GRADE SPOT ELEVATION (AT DECIMAL POINT OR AT ARROWHEAD)
CI CIP CISP	CAST IRON CAST IRON PIPE CAST IRON SOIL PIPE	PCC PCF PE	PORTLAND CEMENT CONCRETE POUNDS PER CUBIC FOOT PLAIN END	SRAI		FLOW LINE
CLR CMP CO COL	CLEAR CORRUGATED METAL PIPE CLEANOUT	PI PIV PL PMH	POINT OF INTERSECTION POST INDICATOR VALVE PLATE POWER MANHOLE	РОС	—8" S——	WROUGHT IRON FENCE SANITARY SEWER LINE WITH PIPE SIZE
COMM CONC CONN	COLUMN COMMUNICATION CONCRETE CONNECTION	POC	POWER MANHOLE POINT ON CURVE OR POINT OF CONNECTION POWER POLE	, TOP(<u>—</u> 6" W——	WATER LINE WITH PIPE SIZE
CONST	CONSTRUCTION CONTINUOUS, CONTINUATION OR CONTENT	PROJ PRV PS	PROJECTION OR PROJECT PRESSURE RELIEF VALVE PRESSURE SEWER	ING	—6" FW──	FIRE WATER LINE WITH PIPE SIZE
CU CP CV CW	CUBIC CONCRETE PIPE CHECK VALVE COLD WATER	PSF PSI PT PVC	POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POINT OF TANGENCY POLYVINYL CHLORIDE	Х Ш	——4"BD——— ——8" SD——	PERFORATED BIOSWALE DRAIN LINE STORM DRAIN LINE WITH PIPE SIZE
CY D DB	CUBIC YARDS DRAIN, DEGREE OF CURVE DUCT BANK	PVMT Q	PAVEMENT RATE OF FLOW	<u>~</u>	⇔ FDC	FIRE DEPARTMENT CONNECTION
DET DI DIA	DETAIL DETAIL DRAIN INLET DIAMETER	R RCB	RADIUS REINFORCED CONCRETE BOX	FO	3" G	GAS LINE WITH PIPE SIZE
DIM DIP DMH	DIMENSION DUCTILE IRON PIPE DRAIN MANHOLE	RCP RD RED REF	REINFORCED CONCRETE PIPE ROAD OR ROOF DRAIN REDUCER OR REDUCING REFERENCE	C011	OSDMH	SEWER MANHOLE STORM DRAIN MANHOLE
DIST DWG	DISTANCE DRAWING	REINF REQD REV	REINFORCEMENT OR REINFORCED REQUIRED REVISION) ⊢ ⊟	<u> </u>	CLEANOUT
E EA ECC	EAST EACH ECCENTRIC	RTE RW R/W	ROUTE RAW WATER RIGHT OF WAY	SHEE	—	REDUCER
ECR EF EL ELEC	END CURB RETURN EACH FACE ELEVATION ELECTRIC OR ELECTRICAL	S SS	SOUTH, SLOPE OR SEWER SANITARY SEWER			GATE VALVE
EMH EP EQ	ELECTRICAL MANHOLE EDGE OF PAVEMENT EQUAL	SCH SD SDMH	SCHEDULE STORM DRAIN STORM DRAIN MANHOLE	S	————	POST INDICATOR VALVE
EQUIP EW EXC	EQUIPMENT EACH WAY EXCAVATION	SECT SF SEC SHT	SECTION SQUARE FEET SECONDS SHEET			VALVE PIT
EXIST EXP_JT/EJ	EXISTING EXPANSION JOINT	SIG SIM SL	SIGNAL SIMILAR SURVEY LINE		+⊙+ _{FH}	FIRE HYDRANT
F FD FDC	FUEL FOUNDATION DRAIN OR FLOOR DRAIN FIRE DEPARTMENT CONNECTION	SSMH SPEC SQ	SEWER MANHOLE SPECIFICATION SQUARE		$- \not\!$	BUTTERFLY VALVE
FH FDN FFE FG	FIRE HYDRANT FOUNDATION FINISHED FLOOR ELEVATION FINISHED GRADE	ST STA STD STL	STREET OR STEAM STATION STANDARD STEEL			
FS FIN FIG	FINISHED SURFACE FINISH OR FINISHED FIGURE	STRUC SYMM SYS	STRUCTURAL SYMMETRICAL SYSTEM			
FL FLG FLR FM	FLOW LINE FLANGE FLOOR FORCE MAIN	Т	TANGENT, TELEPHONE, TOP OR THICKNESS			
FT FTG FW	FOOT OR FEET FOOTING FIRE WATER	T&B	THRUST BLOCK OR TOP OF BRICK TOP AND BOTTOM			
G GA	GAS GAUGE	TC TG TOP	TOP OF CURB OR TOP OF CONCRETE TOP OF GRATE TOP OF PIPE			
GAL GALV GB	GALLON GALVANIZED GRADE BREAK	TP TW TEL	TOP OF PAVEMENT TOP OF WALL TELEPHONE			
GIP GPM GR GRD	GALVANIZED IRON PIPE GALLONS PER MINUTE GRADE GROUND	THK THRU TMH TYP	THICK THROUGH TELEPHONE MANHOLE TYPICAL			
GS GV	GALVANIZED STEEL GATE VALVE	UG	UNDERGROUND UNKNOWN			
HDWL HGT	HOSE BIBB HEADWALL HEIGHT	UNK UON	UNLESS OTHERWISE NOTED			
HR HGL HORIZ	HANDRAIL HYDRAULIC GRADE LINE HORIZONTAL	V VB VC VCP	VALVE OR VENT VALVE BOX VERTICAL CURVE VITRIFIED CLAY PIPE			
HPFL	HIGH POINT, HORSEPOWER OR HIGH PRESSURE HIGH POINT FLOW LINE HOT WATER	VERT W	VERTICAL WATER OR WEST	".	NUMBER OR POUND	SECTION LET
HWR	HOT WATER RETURN HOT WATER SUPPLY	W/ WD	WITH WIDTH OR WOOD	\triangle	2 HORIZONTAL TO 1	VERTICAL A C901

WITH VALVE WASTE WATER

YARD HYDRANT

W/O WP WT

NASA Ames - 12:11:34

INSUL

ΚO

INSIDE DIAMETER

INVERT ELEVATION

JUNCTION BOX JUNCTION STRUCTURE

KNOCKOUT

INSULATED OR INSULATION

ISSUED FOR CONSTRUCTION

WITH
WIDTH OR WOOD
WOODEN LIGHT POLE
WITHOUT
WORK POINT
WEIGHT

WELDED WIRE FABRIC

GENERAL NOTES:

- 1. THE LOCATION OF UTILITIES AND OTHER OBSTRUCTIONS SHOWN ON THESE PLANS HAVE BEEN MADE BY ACTUAL FIELD MEASUREMENTS, SUPPLEMENTED BY RECORD INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SUCH INFORMATION TO HIS OWN SATISFACTION AND SHALL NOTIFY THE FIELD CONTRACTING OFFICER TO BEGINNING OF WORK IF ANY DISCREPANCIES ARE FOUND.
- 2. THE CONTRACTOR SHALL OBTAIN THE CONTRACTING OFFICER'S APPROVAL PRIOR TO DEMOLITION OF ANY FENCING.

 3. THE CONTRACTOR SHALL ADHERE TO ALL SAFETY CODES, REGULATIONS, SECURITY AND SPECIFICATIONS FOR THE DURATION OF THIS CONTRACT.
- 4. THE CONTRACTOR SHALL COMPLETE ALL WORK SHOWN ON THE PLANS AND IN THE SPECIFICATIONS UNLESS INDICATED AS NOT IN CONTRACT (NIC).

GRADING NOTES:

GENERAL

- 1. ALL GRADING SHALL CONFORM TO THE 2007 CALIFORNIA BUILDING CODE.
- 2. ALL PROPERTY CORNERS SHALL BE CLEARLY DELINEATED IN THE FIELD PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION/GRADING.
- 3. SITE GRADING SHALL BE DONE UNDER THE SUPERVISION OF A SOILS ENGINEER IN CONFORMANCE WITH RECOMMENDATIONS OF THE GEOTECHNICAL STUDY BY FUGRO WEST, INC. DATED OCTOBER 2008. TWO SETS OF THE FINAL COMPACTION REPORT SHALL BE SUBMITTED TO THE BUILDING AND SAFETY DEPARTMENT AND SHALL INCLUDE CERTIFICATION THAT GRADING HAS BEEN COMPLETED IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE SITE INVESTIGATION REPORT.
- HE CONTRACTOR SHALL NOTIFY THE CONTRACING OFFICER AT LEAST 24 HOURS IN ADVANCE TO REQUEST FINISH LOT GRADE AND DRAINAGE INSPECTION.
- 5. THE CONTRACTOR SHALL NOTIFY THE CLIENT TWO DAYS BEFORE DIGGING AT 1-650-604-6659.

CUT / FILL

- 6. MAXIMUM CUT AND SLOPE = 2:1. NO FILL SHALL BE PLACED ON EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL AND OTHER DELETERIOUS MATERIAL FILLS SHOULD BE PLACED IN THIN LIFTS (8-INCH MAX OR AS RECOMMENDED IN SOILS REPORT). COMPACTED AND TESTED AS GRADING PROCESS
- 7. NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL WITH A MAXIMUM DIMENSION GREATER THAN 12 INCHES SHALL BE BURIED OR PLACED IN FILLS CLOSER THAN 10 FEET TO THE
- 8. A FINAL COMPACTION REPORT SHALL BE SUBMITTED FOR ALL FILLS OVER 1' DEEP.

DRAINAGE AND EROSION / DUST CONTROL

- 9. NO OBSTRUCTION OF NATURAL WATER COURSES SHALL BE PERMITTED.
- 10. DURING ROUGH GRADING OPERATIONS AND PRIOR TO CONSTRUCTION OF PERMANENT DRAINAGE STRUCTURES, TEMPORARY DRAINAGE CONTROL (BEST MANAGEMENT PRACTICES, BMPS) SHALL BE PROVIDED TO PREVENT PONDING WATER AND DAMAGE TO ADJACENT PROPERTIES.
- DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS. 12. ALL EXISTING DRAINAGE COURSES ON THE PROJECT SITE MUST CONTINUE TO FUNCTION. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING OPERATIONS.
- 13. FINISH GRADE SHALL BE SLOPED AWAY FROM ALL EXTERIOR WALLS AT NOT LESS THAN 1/2" PER FOOT FOR A MINIMUM OF 3'.

COMPLETION OF WORK

-SECTION LETTER

WHERE SHOWN

-DETAIL NUMBER

WHERE SHOWN

C901

ΑТ

DIAMETER

CENTERLINE

PROPERTY LINE

1 VERTICAL ON 2 HORIZONTAL

1 ON 2

14. A REGISTERED CIVIL ENGINEER SHALL SUBMIT TO THE CONTRACTING OFFICER WRITTEN CERTIFICATION OF COMPLETION OF GRADING IN ACCORDANCE WITH THE APPROVED GRADING PLAN PRIOR TO REQUESTING INSPECTION AND ISSUANCE OF THE BUILDING PERMIT. CERTIFICATION SHALL INCLUDE LINE, GRADE, SURFACE DRAINAGE, ELEVATION, AND LOCATION OF PERMITTED GRADING ON THE LOT

NPDES: WHEN ONE ACRE OR MORE IS BEING DISTURBED:

- 1. CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (BMPS) FOR THE MANAGEMENT OF STORM WATER AND NON-STORMWATER DISCHARGES SHALL BE IMPLEMENTED ON THE JOB SITE THROUGHOUT THE TIME OF CONSTRUCTION. THE IMPLEMENTATION AND MAINTENANCE OF SITE BMPS IS REQUIRED TO MINIMIZE JOB SITE EROSION AND SEDIMENTATION. CERTAIN BMPS MAY BE REQUIRED TO REMAIN IN PLACE THROUGHOUT THE YEAR TO MINIMIZE EROSION AND SEDIMENTATION.

- CERTAIN BMPS MAY BE REQUIRED TO REMAIN IN PLACE THROUGHOUT THE YEAR TO MINIMIZE EXOSION AND SEDIMENTATION.

 EROSION CONTROL BMPS SHALL BE IMPLEMENTED AND MAINTAINED TO MINIMIZE THE ENTRAINMENT OF SOIL IN RUNOFF FROM DISTURBED SOIL AREAS ON CONSTRUCTION SITES.

 SEDIMENT CONTROL BMPS SHALL BE IMPLEMENTED AND MAINTAINED TO MINIMIZE THE TRANSPORT OF SOIL FROM THE CONSTRUCTION SITE.

 GRADING SHALL BE PHASED TO LIMIT THE AMOUNT OF DISTURBED AREAS EXPOSED TO THE EXTENT FEASIBLE.

 AREAS THAT ARE CLEARED AND GRADED SHALL BE LIMITED TO ONLY THE PORTION OF THE SITE THAT IS NECESSARY FOR CONSTRUCTION. THE CONSTRUCTION SITE SHALL BE MANAGED TO MINIMIZE THE EXPOSURE TIME OF DISTURBED SOIL AREAS THROUGH PHASING AND SCHEDULING OF GRADING AND THE USE OF TEMPORARY AND PERMANENT SOIL
- 6. ONCE DISTURBED, SLOPES (TEMPORARY OR PERMANENT) SHALL BE STABILIZED IF THEY WILL NOT BE WORKED WITHIN 21 DAYS. DURING THE STORM SEASON, ALL SLOPES SHALL BE STABILIZED PRIOR TO A PREDICTED STORM EVENT. CONSTRUCTION SITES SHALL BE REVEGETATED AS EARLY AS FEASIBLE AFTER SOIL DISTURBANCE.
- STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO ELIMINATE OR REDUCE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.
- 8. THE CONSTRUCTION SITE SHALL BE MAINTAINED IN SUCH A CONDITION THAT A STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OTHER THAN STORMWATER (NON-STORMWATER DISCHARGES) ARE PROHIBITED. EXCEPT AS AUTHORIZED BY AN INDIVIDUAL NPDES PERMIT. THE STATEWIDE GENERAL PERMIT. CONSTRUCTION ACTIVITY: POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STATEWIS SELENTS, SELENTS, SELENTS, SELENTS, SELENTS, SELENTS, SELENTS, AND ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; CONCRETE AND RELATED CUTTING OR CURING RESIDUES; FLOATABLE WASTES; WASTES FROM ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING; WASTES FROM STREET CLEANING; AND SUPER-CHLORINATED POTABLE WATER FROM LINE FLUSHING AND TESTING. DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON—SITE PHYSICALLY SEPARATED FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.

 RUNOFF FROM EQUIPMENT AND VEHICLE WASHING SHALL BE CONTAINED AT CONSTRUCTION SITE AND MUST NOT BE DISCHARGED TO RECEIVING WATERS OR THE LOCAL STORM
- DRAIN SYSTEM
- 10. APPROPRIATE BMPS FOR CONSTRUCTION—RELATED MATERIALS, WASTES, SPILLS OR RESIDUES SHALL BE IMPLEMENTED TO ELIMINATE OR REDUCE TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTIES BY WIND OR RUNOFF.
- 11. ALL CONSTRUCTION CONTRACTORS AND SUBCONTRACTOR PERSONNEL ARE TO BE MADE AWARE OF THE REQUIRED BMPS AND GOOD HOUSEKEEPING MEASURES FOR THE
- PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS. 12. DISCHARGING CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING GROUNDWATER THAT HAS INFILTRATED INTO THE CONSTRUCTION SITE IS PROHIBITED. DISCHARGING OF CONTAMINATED SOILS VIA SURFACE EROSION IS ALSO PROHIBITED. DISCHARGING NON-CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING ACTIVITIES MAY REQUIRE A
- NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE REGIONAL WATER QUALITY CONTROL BOARD. 13. BMPS SHALL BE MAINTAINED AT ALL TIMES. IN ADDITION. BMPS SHALL BE INSPECTED PRIOR TO PREDICTED STORM EVENTS AND FOLLOWING STORM EVENTS
- 14. AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY, ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED OF IN TRASH OR RECYCLE BINS.

DMIM H&N **AECOM**

WILLIAM MCDONOUGH + PARTNERS Architecture + Community Design

700 EAST JEFFERSON STREET CHARL OTTFSVILLE, VIRGINIA 22902

T 434.979.1111 F 434.979.1112 www.mcdonoughpartners.c

CIVIL ENGINEER: DMJM HARRIS 999 TOWN AND COUNTRY ROAD 714.567.2501 F 714.567.2777

NDSCAPE ARCHITECT:

HONE

IECHANICAL, ELECTRICAL & PLUMBING EN

999 TOWN AND COUNTRY ROAD

STRUCTURAL ENGINEER: DMJM H&N AECOM 999 TOWN AND COUNTRY ROAD ORANGE, CALIFORNIA 92868 T 714.567.2752 F 714.567.2729

ANDSCAPE CONSULTANT: BITEWORKS STUDIO 126-C HINTON AVENUE CHARLOTTESVILLE, VIRGINI

IGHTING CONSULTANT:

DISOS & UBBELOHDE 117 CLEMENT AVENUE, BLDG 10A

CONSTRUCTION MANAGER

PRELIMINARY - NOT FOR CONSTRUCTION 10/20/2008 30% PRICING 11/07/2008 30% DESIGN REVISION 12/12/2008 60% INTERNAL QA/QC & COST ESTIMATE 12/19/2008 60% PRE-FINAL, NASA REVIEW 01/19/2009 60% FINAL ISSUE TO NASA 02/16/2009 90% QAQC & COST ESTIMATE Ames Research Center Moffet Field, California N232 COLLABORATIVE SUPPORT FACILITY **CIVIL ABBREVIATIONS** AND LEGEND D 25307 A232-0800-C001





















